

Vermont Mental Health Performance Indicator Project
DDMHS, Weeks Building, 103 South Main Street, Waterbury, VT 05671-1601 (802-241-2638)

MEMORANDUM

TO: Vermont Mental Health Performance Indicator Project
Advisory Group and Interested Parties

FROM: John Pandiani
Monica Simon

DATE: August 24, 2001

RE: Rates of Mortality After Inpatient Behavioral Health Care in Different Settings

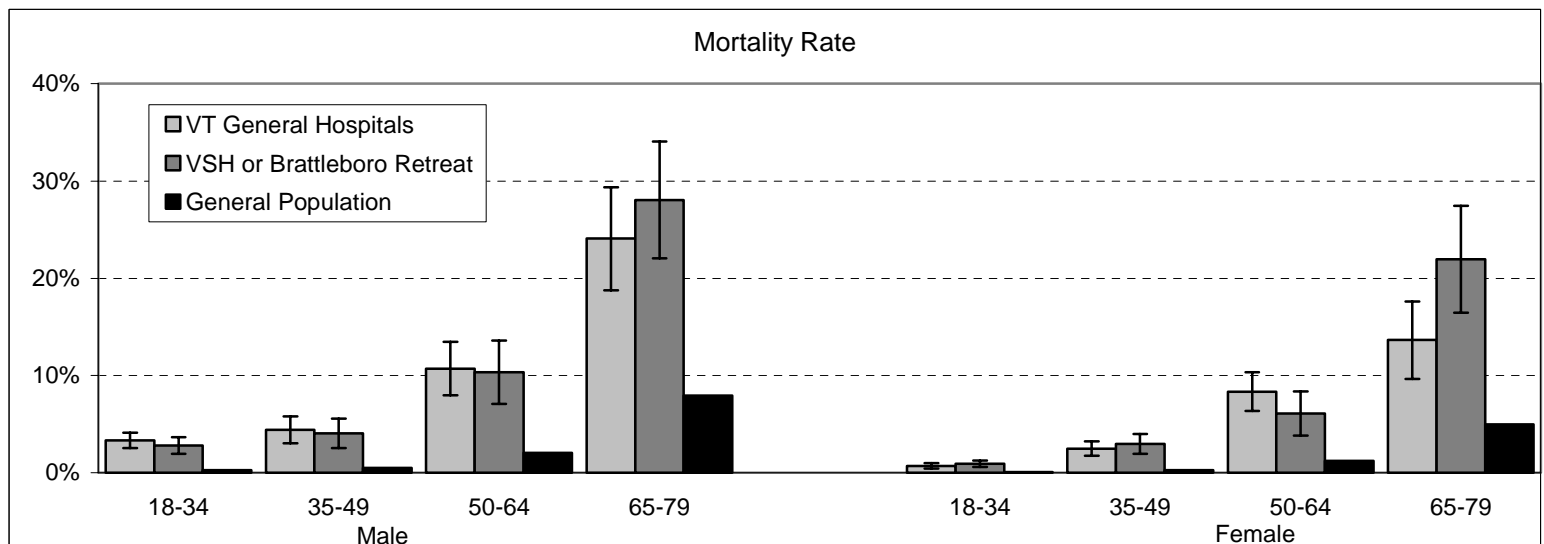
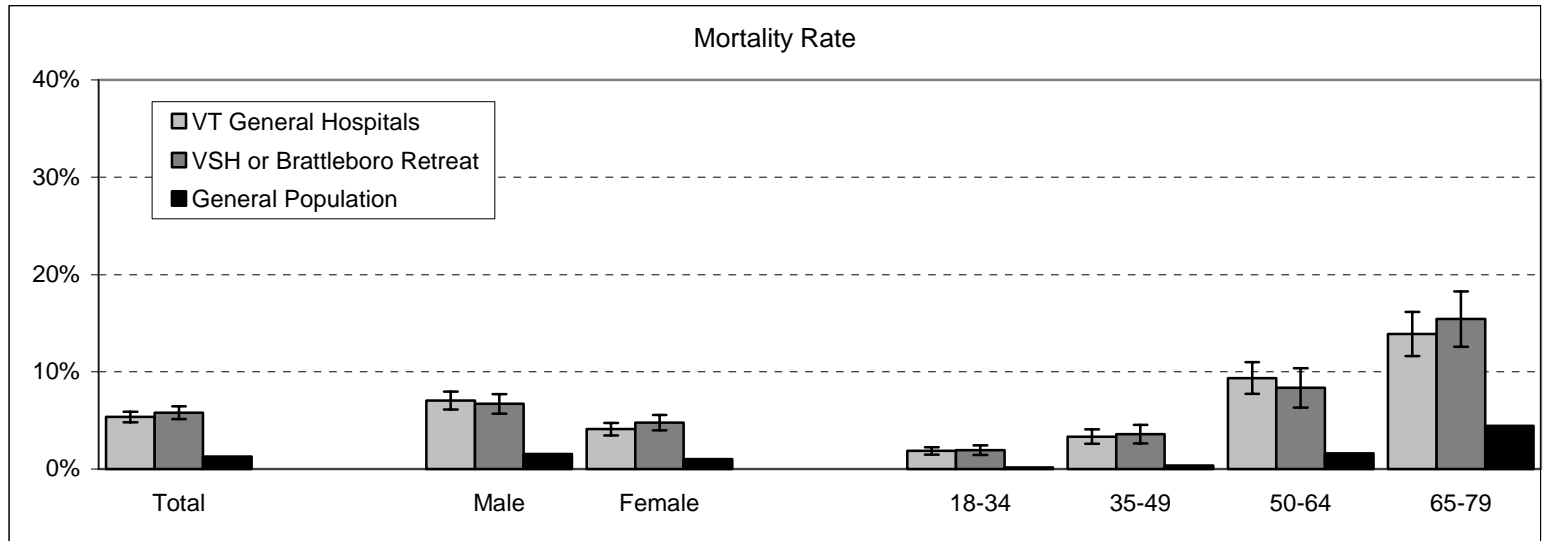
In response to our recent report on Inpatient Behavioral Health Care Utilization Rates (5/11/2001: www.state.vt.us/dmh/Data/PIPs/2001/pip051101.pdf), Boyd Tracy (President of NAMI-VT and PIP Advisory Group Member) asked a question that involved combining that analysis with the analysis of mortality rates that we reported late last year (12/15/2000: www.state.vt.us/dmh/Data/PIPs/2000/pip121500.pdf). Boyd asked for a comparison of the mortality rates of people who received inpatient behavioral health care in psychiatric hospitals (VSH and Brattleboro Retreat) with the mortality rates for people who received inpatient behavioral health care in Vermont's general hospitals.

The data used in this analysis were drawn from two sources. The Vital Records Mortality Database, maintained by the Vermont Department of Health, provided information on all Vermont residents who died during the study period. The Inpatient Hospital Data Set includes database extracts from the Brattleboro Retreat, the Vermont State Hospital, and the Hospital Discharge Data Set, provided by the Department of Health. The Inpatient Hospital Data Set includes information on all Vermont residents who were hospitalized for behavioral health care during the study period. The analysis required to answer this question involved measuring the overlap between two data sets (the number of individuals who appear in both data sets). Because these data sets do not share unique person identifiers, Probabilistic Population Estimation was used to determine the number of people in the inpatient treatment population who died during the treatment year or the following year. In order to account for expected variation in year-to-year mortality rates due to the relatively small numbers involved, two-year mortality rates were calculated for all clients served in each of six base years. In order to account for natural variation in mortality rates among people in different age and gender categories, mortality rates were determined for the patient population and the general population in each of eight age/gender categories. For purposes of comparison, the mortality rate for all Vermont residents in each of these categories are reported as well.

As you will see, the mortality rates for both treatment groups are substantially higher than the rates for the general population in the same demographic categories. The mortality rates for the general hospital treatment group, however, were not significantly different from the mortality rates for the specialty psychiatric hospital treatment group in 14 of the 15 demographic groups examined. Location of hospitalization is not related to mortality rates among recipients of inpatient care in Vermont during 1992 through 1997.

We would welcome more questions that involve combining data sets and analyses in different ways than we have in the past. Please send your questions to jpandiani@ddmhs.state.vt.us or call 802-241-2638.

Average Annual Rate of Mortality of Hospitalization During the Year of Treatment or the Subsequent Year: 1992 - 1997 Psychiatric Hospitals and Psychiatric Services in General Hospitals



	Total	Male	Female	18 - 34	35 - 49	50 - 64	65 - 79
VT General Hospitals	5% ± 0.5%	7% ± 0.9%	4% ± 0.7%	2% ± 0.4%	3% ± 0.7%	9% ± 1.6%	14% ± 2.3%
VSH or Brattleboro Retreat	6% ± 0.7%	7% ± 1.0%	5% ± 0.8%	2% ± 0.5%	4% ± 0.9%	8% ± 2.0%	15% ± 2.9%
General Population	1.3%	1.5%	1.0%	0.2%	0.4%	1.6%	4.4%

	Male				Female			
	18 - 34	35 - 49	50 - 64	65 - 79	18 - 34	35 - 49	50 - 64	65 - 79
VT General Hospitals	3% ± 0.8%	4% ± 1.4%	11% ± 2.7%	24% ± 5.3%	1% ± 0.3%	2% ± 0.8%	8% ± 2.0%	14% ± 4.0%
VSH or Brattleboro Retreat	3% ± 0.9%	4% ± 1.5%	10% ± 3.2%	28% ± 6.0%	1% ± 0.3%	3% ± 1.0%	6% ± 2.3%	22% ± 5.5%
General Population	0.3%	0.5%	2.0%	7.9%	0.1%	0.3%	1.2%	5.0%

Based on analysis of extracts from hospital databases provided by the Vermont State Hospital, the Brattleboro Retreat, the Hospital Discharge data set and the Vital Records database maintained by the Vermont Health Department. Because these databases do not share unique client identifiers, Probabilistic Population Estimation was used to calculate the number of clients who died in the year of treatment or the subsequent year (with 95% confidence intervals).